

PRAIRIE DOG BORING MACHINES

Boring Machines Can Be Dangerous If Operated Improperly!

SAFETY INSTRUCTIONS

1. OPERATOR ONLY should be allowed near the machine.
2. NEVER STAND, or allow anyone else to stand near the boring machine when rotating.
3. KEEP ALL GUARDS and shields in place while machine is running.
4. SHUT OFF ENGINE before leaving machine.
5. ALWAYS STOP engine before servicing machine.
6. REMOVE KEY or spark plug wire when leaving machine unattended.
7. ALLOW ENGINE TO COOL before refueling.
8. WEAR TIGHT FITTING CLOTHES when using boring machines and keep your hands, feet and clothing away from moving parts.
9. KNOW what is down there before you bore. If necessary, get clearance from the phone company, power company, community water and sewer departments.
10. MOVE SLOWLY when starting to bore.
11. USE THE " BUDDY SYSTEM." Do not work alone in isolated areas.
12. ALWAYS, ALWAYS, ALWAYS stay at the controls of the machine. You may have to stop suddenly to avoid danger. Staying at the controls will also keep you away from the dangerous part of the machine.

PLEASE OBSERVE these instructions. They are considered common sense by professional boring contractors. There is just no substitute for a careful, safety-minded operator. SERIOUS INJURY OR DEATH COULD RESULT FROM FAILURE TO FOLLOW THESE SUGGESTIONS.

PRAIRIE DOG MODELS 500RTW & 900RTW

OPERATING INSTRUCTIONS

Soil conditions can vary widely between areas. These procedures are offered as general guidelines only. Users may find it desirable to use methods of their own development.

THE HOLE. Make a narrow approach trench in front of the bore entry point that can be straddled by the machine. It should be at least 30' long for a bore 36" deep, and should be proportionally longer than 3' for a deeper bore. (Fig 1-A)

On the opposite end of the bore from the bore entry point, a come-out hole is needed to change the tooling after the pilot hole is made. The come-out hole should be about 3' wide (perpendicular to the bore direction), at least 6" long (in the bore direction) and slightly deeper than the bore depth. (Fig 1-B)

THE LINE UP. Set the machine over the trench and level it with the bottom of the trench or with the drill rod guides. (Fig 1-C) Place a level on the first joint of drill rod installed in the drill rod string. (Fig 1-D) Align the machine to the come-out point using two stakes, or using a string and the first joint of drill rod in the machine.

WATER. Use a common garden hose from any water source with 35-40 psi. If no water supply is available then a water tank with a pressure pump may be used. The amount of water needed will vary with soil conditions, but generally a 55 gallon drum of water will bore a 2" hole 30' long.

DRILLING. Install the pilot bit on the first drill rod joint. Start the engine, engage the clutch or transmission and turn on the water to see if the pilot bit is clear of obstructions. Push the machine forward 2"-3", then back 2"-3". This action will let the bit flush itself as it advances.

When boring there should be a small amount of water coming back out of the hole at all times. (Fig 1-E) This signals to the operator that the bit is not clogged and that circulation is not lost due to a void in the earth. If the bit is forced forward too hard and clogs, the advancing may be stopped for a few moments and the circulating water will clear the bit.

BACKREAMING. When the pilot bit has completed the pilot hole to the come-out point, remove the pilot bit and install a backreamer of the desired hole size in one step. Never try to stage the reamers (from 2" bit to 4" reamer to 6" reamer, for example). Screw the cable swivel onto the backreamer and, if desired, attach the cable to it. The cable may be used to pull back the pipe, or the pull plug if the hole diameter is large enough to require a pull plug. Be sure the cable is straightened so that it does not twist.

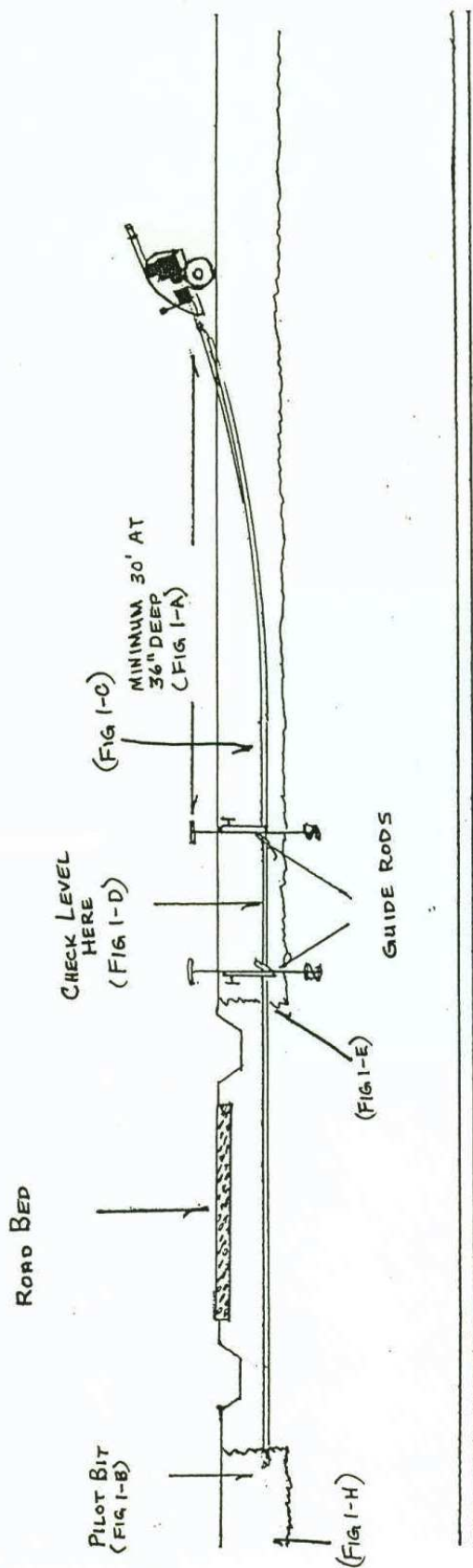
When boring be sure not to force the machine forward or backward. It has more power than usually needed. Be sure to add enough water to make slurry with the consistency of a thick malt. If the advance is too fast it will leave big chunks of material rather than fine pieces. Run with a slow but steady force so the mixture will beat into a smooth mixture. This is desirable for two reasons. First, the mixture keeps the hole open so that it will not cave in. Second, it allows the pipe, conduit or pull plug to be pulled back easily.

A WORD OF CAUTION. When starting a job, begin early and try if possible to complete it the same day. NEVER leave the drill rod in the hole for more than an hour when you have stopped drilling. The water will leach out of the soil, making the soil sticky or hard again, which can cause the drill rod to seize.

INSTALLING THE PIPE. When boring small diameter holes it is not necessary to use a pull plug or swab. When boring larger diameter holes a plug may be pulled back through the hole with a cable on either side to force the sludge out of the hole. The cable may then be attached to the pipe so that it may be pulled through the bore. The job is then complete.

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SIDE VIEW



TOP VIEW

